PCT

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: EDWIN H. TAYLOR
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PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing *(day/month/year)*	15 DEC 1997
Applicant's or agent's file reference: 042390.P3314PCT	REPLY DUE within TWO months from the above date of mailing

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US96/20516	17 DECEMBER 1996	19 DECEMBER 1995

International Patent Classification (IPC) or both national classification and IPC
IPC(6): G06F 7/22 and US Cl.: 395/569, 570, 378, 678

Applicant
Intel Corporation

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I [X] Basis of the opinion
- II [ ] Priority
- III [ ] Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV [ ] Lack of unity of invention
- V [X] Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI [ ] Certain documents cited
- VII [ ] Certain defects in the international application
- VIII [ ] Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension., see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 19 APRIL 1998.

Name and mailing address of the IPEA/US	Authorized officer
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Form PCT/IPEA/408 (cover sheet) (January 1994)*

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International application No.
PCT/US96/20516

I. Basis of the opinion

1. This opinion has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".)*:

[X] the international application as originally filed.

[X] the description, pages 1-130 , as originally filed.
pages NONE , filed with the demand.
pages NONE , filed with the letter of _____.

[X] the claims, Nos. 1-16 , as originally filed.
Nos. NONE , as amended under Article 19.
Nos. NONE , filed with the demand.
Nos. NONE , filed with the letter of _____.

[X] the drawings, sheets/~~fig~~ 1-20 , as originally filed.
sheets/~~fig~~ NONE , filed with the demand.
sheets/~~fig~~ NONE , filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

[X] the description, pages NONE

[X] the claims, Nos. NONE

[X] the drawings, sheets/~~fig~~ NONE

3. [ ] This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:
NONE

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	1-16	YES
	Claims	NONE	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-16	NO
Industrial Applicability (IA)	Claims	1-16	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-16 lack an inventive step under PCT Article 33(3) as being obvious over Sharangpani (US. patent 5,522,051).

Sharangpani discloses the invention substantially as claimed [see Figs. 1-7c].

Taking claim 1 as an exemplary claim, the reference discloses a system comprising:

a plurality of tags associated with a first storage area indicating that locations in first storage area are either empty or non-empty responsive to the execution of floating point instructions which modify data contained in the first storage area [see col. 8, lines 19-50];

a first circuit coupled to the plurality of tags, setting the plurality of tags to a non-empty state responsive to receipt of first instruction which specifies an operation upon packed data stored in the first storage area, the setting of the plurality of tags indicating execution of instructions which operate upon the packed data [see col. 8, lines 19-50];

a second circuit coupled to the plurality of tags, setting only the plurality of tags to an empty state responsive to receipt of a second instruction which indicates termination of the execution of the instructions which operate upon the packed data stored in the first storage area [see col. 8, lines 32-50].

Sharangpani does not specifically mentions that packed data is being operated upon, however the type of data being stored or operated upon is a matter of engineering choice.

As to claim 2, Sharangpani discloses:

a third circuit for clearing a top of stack pointer responsive to receipt of the first instruction or the second instruction [see col. 7, line 54 to col. 8, line 4].

As to claim 3, Sharangpani discloses:

the first storage includes a mantissa [Significand] portion and a corresponding exponent portion, and the packed data is packed in a mantissa portion of the first storage area [see fig. 4, unit 32 and col. 7, lines 36-53].

(Continued on Supplemental Sheet.)

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Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

As to claim 4, Sharangpani discloses:

a circuit for setting the corresponding exponent portion to a predetermined value upon performing the operation upon packed data stored in the first storage area [see fig. 4, unit 32 and col. 7, lines 36-53].

As to claim 5, Sharangpani discloses:

the plurality of tags includes two bits [see col. 8, lines 41-50].

As to claim 6, Sharangpani discloses:

the setting of only the plurality of tags to an empty state includes setting the two bits to a set state [see col. 8, line 45-46].

As to claim 7, Sharangpani discloses:

the setting of only the plurality of tags to a non-empty state includes setting both of the two bits to other than set state [see col. 8, line 41-42].

As to claim 8, it does not teach or define above the invention claimed in claim 1, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 1, supra.

As to claim 9, it does not teach or define above the invention claimed in claim 1, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 1, supra.

As to claim 10, it does not teach or define above the invention claimed in claim 2, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 2, supra.

As to claims 11-12, they do not teach or define above the invention claimed in claim 3, and are therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 3, supra.

As to claim 13, it does not teach or define above the invention claimed in claim 4, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 4, supra.

As to claim 14, it does not teach or define above the invention claimed in claim 5, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 5, supra.

As to claim 15, it does not teach or define above the invention claimed in claim 6, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 6, supra.

As to claim 16, it does not teach or define above the invention claimed in claim 7, and is therefore lacks inventive step under Sharangpani for the same reasons set fourth in claim 7, supra.

———— NEW CITATIONS ————

NONE